OVERVIEW: Research and development is a critical contributor to innovation and long-term economic growth, and the United States has a long history of being a global leader. According to a new collaborative report from The Council of State Governments and Elsevier—“America’s Knowledge Economy: A State-by-State Review”—the United States published more than 536,000 publications in 2013. Predictably, states with larger populations also tended to publish more. For example, California and New York were the top two producers from 2004 to 2013. From 2004 to 2013, a big chunk of United States publications—more than one-quarter—focused on the field of medicine. Over the same period, Massachusetts and California produced the most impactful research—also called field-weighted citation impact—among all states. This brief offers a state-specific snapshot of data pulled from the report. To read the full report, visit www.csg.org/knowledgeeconomy.

<table>
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<th>1.31 PUBLICATIONS</th>
<th>FIELD-WEIGHTED CITATION IMPACT, 2004–13</th>
</tr>
</thead>
<tbody>
<tr>
<td>PER 1,000 RESIDENTS, 2013</td>
<td>1.22 Cited 22% more than global average</td>
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U.S. Average: 1.70 publications per 1,000 residents

MOST IMPACTFUL RESEARCH AREA

ENERGY

Ranked 9th among all states in terms of research impact and cited 29% more than the U.S. average.

PENNSYLVANIA

TOP COLLABORATING STATE, 2004–13

1,895 collaborations (9.3% of all of West Virginia's publications)

RESEARCH FROM GOVERNMENT SECTOR, 2004–13

17.5% of West Virginia’s total research output is from its government sector, the 4th highest rate among all states.

INTERNATIONAL RESEARCH AUDIENCE

73.1% of all usage of West Virginia's research come from outside the U.S., the 5th highest among all states.
Number of academic publications per million $ USD in higher education R&D expenditures for U.S. states, 2004–13 (in 2013 $)

Source: Scopus® and NSF Higher Education Research and Development Survey

Impact Across Research Fields, 2004–13

Source: Scopus®

West Virginia universities produced 7.8 publications per million $ USD R&D from 2004 to 2013.

West Virginia’s research in energy is cited 29% more than the U.S. average.